

# 711  
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 Page 1 of 8  
 1633

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/669,187A

DATE: 02/05/2001  
 TIME: 14:58:29

Input Set : A:\C1039-7035seq.txt  
 Output Set: N:\CRF3\02052001\I669187A.raw

P.S

4 <110> APPLICANT: Krieg, Arthur M.  
 5 Schettler, Christian  
 6 Volmer, Jörg  
 8 <120> TITLE OF INVENTION: Immunostimulatory Nucleic Acids  
 11 <130> FILE REFERENCE: C1039/7035 (HCL/MAT)  
 13 <140> CURRENT APPLICATION NUMBER: US 09/669,187A  
 14 <141> CURRENT FILING DATE: 2000-09-25  
 16 <150> PRIOR APPLICATION NUMBER: US 60/156,113  
 17 <151> PRIOR FILING DATE: 1999-09-25  
 19 <150> PRIOR APPLICATION NUMBER: US 60/156,135  
 20 <151> PRIOR FILING DATE: 1999-09-27  
 22 <150> PRIOR APPLICATION NUMBER: US 60/227,436  
 23 <151> PRIOR FILING DATE: 2000-08-23  
 25 <160> NUMBER OF SEQ ID NOS: 1145  
 27 <170> SOFTWARE: FastSEQ for Windows Version 3.0  
 29 <210> SEQ ID NO: 1  
 30 <211> LENGTH: 18  
 31 <212> TYPE: DNA  
 32 <213> ORGANISM: Artificial Sequence  
 34 <220> FEATURE:  
 35 <223> OTHER INFORMATION: Synthetic Sequence  
 37 <400> SEQUENCE: 1  
 38 tctcccaagc tgcgccat  
 40 <210> SEQ ID NO: 2  
 41 <211> LENGTH: 20  
 42 <212> TYPE: DNA  
 43 <213> ORGANISM: Artificial Sequence  
 45 <220> FEATURE:  
 46 <223> OTHER INFORMATION: Synthetic Sequence  
 48 <400> SEQUENCE: 2  
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 51 <210> SEQ ID NO: 3  
 52 <211> LENGTH: 20  
 53 <212> TYPE: DNA  
 54 <213> ORGANISM: Artificial Sequence  
 56 <220> FEATURE:  
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 59 <400> SEQUENCE: 3  
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 62 <210> SEQ ID NO: 4  
 63 <211> LENGTH: 18  
 64 <212> TYPE: DNA  
 65 <213> ORGANISM: Artificial Sequence  
 67 <220> FEATURE:  
 68 <223> OTHER INFORMATION: Synthetic Sequence  
 70 <400> SEQUENCE: 4  
 71 taccgcgtgc gaccctct

ENTERED

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18

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Input Set : A:\C1039-7035seq.txt  
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73 <210> SEQ ID NO: 5
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75 <212> TYPE: DNA
76 <213> ORGANISM: Artificial Sequence
78 <220> FEATURE:
79 <223> OTHER INFORMATION: Synthetic Sequence
81 <400> SEQUENCE: 5
82 ggggaagggt
84 <210> SEQ ID NO: 6
85 <211> LENGTH: 9
86 <212> TYPE: DNA
87 <213> ORGANISM: Artificial Sequence
89 <220> FEATURE:
90 <223> OTHER INFORMATION: Synthetic Sequence
92 <400> SEQUENCE: 6
93 ggggaagggt
95 <210> SEQ ID NO: 7
96 <211> LENGTH: 9
97 <212> TYPE: DNA
98 <213> ORGANISM: Artificial Sequence
100 <220> FEATURE:
101 <223> OTHER INFORMATION: Synthetic Sequence
103 <400> SEQUENCE: 7
104 ggtgaagggtg
106 <210> SEQ ID NO: 8
107 <211> LENGTH: 20
108 <212> TYPE: DNA
109 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <221> NAME/KEY: modified_base
113 <222> LOCATION: (8)...(8)
114 <223> OTHER INFORMATION: m5c
116 <223> OTHER INFORMATION: Synthetic Sequence
118 <400> SEQUENCE: 8
119 tcatgtngt tctgatgct
121 <210> SEQ ID NO: 9
122 <211> LENGTH: 15
123 <212> TYPE: DNA
124 <213> ORGANISM: Artificial Sequence
126 <220> FEATURE:
127 <221> NAME/KEY: modified_base
128 <222> LOCATION: (11)...(11)
129 <223> OTHER INFORMATION: m5c
131 <223> OTHER INFORMATION: Synthetic Sequence
133 <400> SEQUENCE: 9
134 gtacaccttag ngtga
136 <210> SEQ ID NO: 10
137 <211> LENGTH: 20
138 <212> TYPE: DNA

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139 <213> ORGANISM: Artificial Sequence  
141 <220> FEATURE:  
142 <221> NAME/KEY: modified\_base  
143 <222> LOCATION: (8)...(8)  
144 <223> OTHER INFORMATION: m5c  
146 <223> OTHER INFORMATION: Synthetic Sequence

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OK 148 <400> SEQUENCE: 10  
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151 <210> SEQ ID NO: 11  
152 <211> LENGTH: 20  
153 <212> TYPE: DNA  
154 <213> ORGANISM: Artificial Sequence  
156 <220> FEATURE:  
157 <221> NAME/KEY: modified\_base  
158 <222> LOCATION: (13)...(13)  
159 <223> OTHER INFORMATION: m5c  
161 <223> OTHER INFORMATION: Synthetic Sequence

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169 <213> ORGANISM: Artificial Sequence  
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172 <221> NAME/KEY: modified\_base  
173 <222> LOCATION: (7)...(7)  
174 <223> OTHER INFORMATION: m5c  
176 <223> OTHER INFORMATION: Synthetic Sequence

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183 <212> TYPE: DNA  
184 <213> ORGANISM: Artificial Sequence  
186 <220> FEATURE:  
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190 agctccatgg tctcactg  
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193 <211> LENGTH: 20  
194 <212> TYPE: DNA  
195 <213> ORGANISM: Artificial Sequence  
197 <220> FEATURE:  
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200 <400> SEQUENCE: 14  
201 ccaacgtcac cctcaggcga  
203 <210> SEQ ID NO: 15  
204 <211> LENGTH: 20  
205 <212> TYPE: DNA

20

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206 <213> ORGANISM: Artificial Sequence
208 <220> FEATURE:
209 <223> OTHER INFORMATION: Synthetic Sequence
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214 <210> SEQ ID NO: 16
215 <211> LENGTH: 19
216 <212> TYPE: DNA
217 <213> ORGANISM: Artificial Sequence
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220 <223> OTHER INFORMATION: Synthetic Sequence
222 <400> SEQUENCE: 16
223 gtcactgctg tactctega
225 <210> SEQ ID NO: 17
226 <211> LENGTH: 25
227 <212> TYPE: DNA
228 <213> ORGANISM: Artificial Sequence
230 <220> FEATURE:
231 <223> OTHER INFORMATION: Synthetic Sequence
233 <400> SEQUENCE: 17
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236 <210> SEQ ID NO: 18
237 <211> LENGTH: 25
238 <212> TYPE: DNA
239 <213> ORGANISM: Artificial Sequence
241 <220> FEATURE:
242 <223> OTHER INFORMATION: Synthetic Sequence
244 <400> SEQUENCE: 18
245 gattcaactt gcgctaatct taggc
247 <210> SEQ ID NO: 19
248 <211> LENGTH: 24
249 <212> TYPE: DNA
250 <213> ORGANISM: Artificial Sequence
252 <220> FEATURE:
253 <223> OTHER INFORMATION: Synthetic Sequence
255 <400> SEQUENCE: 19
256 accatggacg aactgtttcc cctc
258 <210> SEQ ID NO: 20
259 <211> LENGTH: 24
260 <212> TYPE: DNA
261 <213> ORGANISM: Artificial Sequence
263 <220> FEATURE:
264 <223> OTHER INFORMATION: Synthetic Sequence
266 <400> SEQUENCE: 20
267 accatggacg agctgtttcc cctc
269 <210> SEQ ID NO: 21
270 <211> LENGTH: 24
271 <212> TYPE: DNA
272 <213> ORGANISM: Artificial Sequence

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Input Set : A:\C1039-7035seq.txt  
Output Set: N:\CRF3\02052001\1669187A.raw

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274 <220> FEATURE:
275 <223> OTHER INFORMATION: Synthetic Sequence
277 <400> SEQUENCE: 21
278 accatggagc acctgtttcc cctc
280 <210> SEQ ID NO: 22
281 <211> LENGTH: 24
282 <212> TYPE: DNA
283 <213> ORGANISM: Artificial Sequence
285 <220> FEATURE:
286 <223> OTHER INFORMATION: Synthetic Sequence
288 <400> SEQUENCE: 22
289 accatggagc acctgtttcc cctc
291 <210> SEQ ID NO: 23
292 <211> LENGTH: 24
293 <212> TYPE: DNA
294 <213> ORGANISM: Artificial Sequence
296 <220> FEATURE:
297 <223> OTHER INFORMATION: Synthetic Sequence
299 <400> SEQUENCE: 23
300 accatggagc acctgtttcc cctc
302 <210> SEQ ID NO: 24
303 <211> LENGTH: 24
304 <212> TYPE: DNA
305 <213> ORGANISM: Artificial Sequence
307 <220> FEATURE:
308 <223> OTHER INFORMATION: Synthetic Sequence
310 <400> SEQUENCE: 24
311 accatggagc acctgtttcc cctc
313 <210> SEQ ID NO: 25
314 <211> LENGTH: 25
315 <212> TYPE: DNA
316 <213> ORGANISM: Artificial Sequence
318 <220> FEATURE:
319 <223> OTHER INFORMATION: Synthetic Sequence
321 <400> SEQUENCE: 25
322 ccactcacat ctgctgctcc acaag
324 <210> SEQ ID NO: 26
325 <211> LENGTH: 25
326 <212> TYPE: DNA
327 <213> ORGANISM: Artificial Sequence
329 <220> FEATURE:
330 <223> OTHER INFORMATION: Synthetic Sequence
332 <400> SEQUENCE: 26
333 actctcaca gccctttag tccag
335 <210> SEQ ID NO: 27
336 <211> LENGTH: 20
337 <212> TYPE: DNA
338 <213> ORGANISM: Artificial Sequence
340 <220> FEATURE:

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FYI:

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY  
 PATENT APPLICATION: US/09/669,187A

DATE: 02/05/2001  
 TIME: 14:58:30

Input Set : A:\C1039-7015seq.txt  
 Output Set : N:\CRF3\02052001\1669187A.raw

L:119 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
 L:134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
 L:149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
 L:164 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
 L:179 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
 L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29  
 L:390 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48  
 L:603 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88  
 L:1051 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89  
 L:1066 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113  
 L:1342 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:179  
 L:2072 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:180  
 L:2087 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:222  
 L:2561 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:249  
 L:2878 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:251  
 L:2912 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:284  
 L:3279 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:288  
 L:3327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:289  
 L:3362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:304  
 L:3543 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:313  
 L:3654 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:335  
 L:3904 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:336  
 L:3923 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:337  
 L:3938 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:338  
 L:3953 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:354  
 L:4145 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:358  
 L:4205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:414  
 L:4845 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:698  
 L:7993 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:707  
 L:8096 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:709  
 L:8122 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:710  
 L:8137 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:728  
 L:8343 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:729  
 L:8358 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:730  
 L:8373 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:731  
 L:8388 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:732  
 L:8403 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:760  
 L:8723 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:762  
 L:8749 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:763  
 L:8764 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:764  
 L:8787 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:798  
 L:9189 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:800  
 L:9219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:801  
 L:9238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:802  
 L:9257 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:803  
 L:9276 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1001  
 L:11495 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1039  
 L:11917 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1039

VERIFICATION SUMMARY

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DATE: 02/05/2001

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Input Set : A:\C1039-7035seq.txt

Output Set: N:\CRF3\02052001\I669187A.raw

L:12112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1056